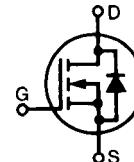


High Current MegaMOS™FET

IXTK 62N25

V_{DSS} = 250 V
 I_{D25} = 62 A
 $R_{DS(on)}$ = 35 mΩ

N-Channel Enhancement Mode



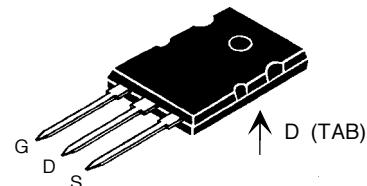
Symbol	Test conditions	Maximum ratings	
V_{DSS}	T_J = 25°C to 150°C	250	V
V_{DGR}	T_J = 25°C to 150°C; $R_{GS} = 1.0\text{ M}\Omega$	250	V
V_{GS}	Continuous	±20	V
V_{GSM}	Transient	±30	V
I_{D25}	T_c = 25°C	62	A
I_{DM}	T_c = 25°C, pulse width limited by T_{JM}	248	A
I_{AR}	T_c = 25°C	62	A
E_{AR}	T_c = 25°C	45	mJ
E_{AS}	T_c = 25°C	1.5	J
dv/dt	$I_s \leq I_{DM}$, $di/dt \leq 100\text{ A}/\mu\text{s}$, $V_{DD} \leq V_{DSS}$, $T_J \leq 150^\circ\text{C}$, $R_G = 2\Omega$	5	V/ns
P_D	T_c = 25°C	390	W
T_J		-55 ... +150	°C
T_{JM}		150	°C
T_{stg}		-55 ... +150	°C
T_L	1.6 mm (0.063 in.) from case for 10 s	300	°C
M_d	Mounting torque	0.7/6	Nm/lb.in.
Weight	TO-264	10	g

Symbol Test Conditions

(T_J = 25°C unless otherwise specified)

Symbol	Test Conditions	Characteristic Values		
		Min.	Typ.	Max.
V_{DSS}	$V_{GS} = 0\text{ V}$, $I_D = 1\text{ mA}$	250		V
$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\text{ }\mu\text{A}$	2.0		4.0 V
I_{GSS}	$V_{GS} = \pm 20\text{ V DC}$, $V_{DS} = 0$			±100 nA
I_{DSS}	$V_{DS} = V_{DSS}$ $V_{GS} = 0\text{ V}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$		50 μA 2 mA
$R_{DS(on)}$	$V_{GS} = 10\text{ V}$, $I_D = 0.5 I_{D25}$ Pulse test, $t \leq 300\text{ ms}$, duty cycle $d \leq 2\%$			35 mΩ

TO-264 AA (IXTK)



G = Gate D = Drain
 S = Source Tab = Drain

Features

- Low $R_{DS(on)}$ HDMOS™ process
- Rugged polysilicon gate cell structure
- International standard package
- Fast switching times

Applications

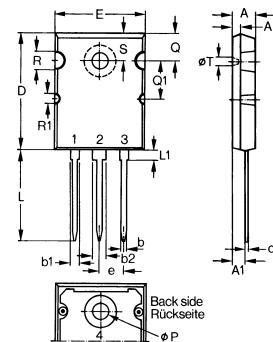
- Motorcontrols
- DC choppers
- Switched-mode power supplies

Advantages

- Easy to mount with one screw (isolated mounting screw hole)
- Space savings
- High power density

Symbol	Test Conditions	Characteristic values		
	($T_J = 25^\circ\text{C}$ unless otherwise specified)	Min.	Typ.	Max.
g_{fs}	$V_{DS} = 10 \text{ V}; I_D = 0.5 I_{D25}$, pulse test	35	50	S
C_{iss} C_{oss} C_{rss}	$V_{GS} = 0 \text{ V}, V_{DS} = 25 \text{ V}, f = 1 \text{ MHz}$	6600	pF	
		1125	pF	
		270	pF	
$t_{d(on)}$ t_r $t_{d(off)}$ t_i	$V_{GS} = 10 \text{ V}, V_{DS} = 0.5 V_{DSS}, I_D = 0.5 I_{D25}$ $R_G = 1.5 \Omega$ (External)	30	ns	
		25	ns	
		115	ns	
		15	ns	
$Q_{g(on)}$ Q_{gs} Q_{gd}	$V_{GS} = 10 \text{ V}, V_{DS} = 0.5 V_{DSS}, I_D = 0.5 I_{D25}$	240	nC	
		55	nC	
		85	nC	
R_{thJC}			0.30 K/W	
R_{thCK}		0.15		K/W

TO-264 AA Outline



Dim.	Millimeter Min.	Millimeter Max.	Inches Min.	Inches Max.
A	4.82	5.13	.190	.202
A1	2.54	2.89	.100	.114
A2	2.00	2.10	.079	.083
b	1.12	1.42	.044	.056
b1	2.39	2.69	.094	.106
b2	2.90	3.09	.114	.122
c	0.53	0.83	.021	.033
D	25.91	26.16	1.020	1.030
E	19.81	19.96	.780	.786
e	5.46	BSC	.215	BSC
J	0.00	0.25	.000	.010
K	0.00	0.25	.000	.010
L	20.32	20.83	.800	.820
L1	2.29	2.59	.090	.102
P	3.17	3.66	.125	.144
Q	6.07	6.27	.239	.247
Q1	8.38	8.69	.330	.342
R	3.81	4.32	.150	.170
R1	1.78	2.29	.070	.090
S	6.04	6.30	.238	.248
T	1.57	1.83	.062	.072

Source-Drain Diode

Ratings and Characteristics
($T_J = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Conditions	Min.	Typ.	Max.
I_s	$V_{GS} = 0 \text{ V}$		62	A
I_{SM}	Repetitive; pulse width limited by T_{JM}		248	A
V_{SD}	$I_F = I_s, V_{GS} = 0 \text{ V}$, Pulse test, $t \leq 300 \mu\text{s}$, duty cycle $d \leq 2 \%$		1.5	V
t_{rr}	$I_F = 30 \text{ A}, -di/dt = 100 \text{ A}/\mu\text{s}, V_R = 100 \text{ V}$	360		ns
Q_{rr}		6		μC